

ASAP

SHIP TO EAGLE 10/07

Work Order ID 50074



Page 1

July 8, 2009 6:34:41 AM

Item ID: D3936-3

Accept



Setup Start



Revision ID: A-PRELIM

Stop



Item Name: Bottom

Start Date: 7/08/09 Start Qty: 1.00



Cust Item ID:

Required Date: 7/10/09 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3936

A-PRELIM

100

0.00



Waterjet

FLOW CNC Waterjet

Memo

0.00

1-Cut as per Dwg D3936

Dwg Rev: A-Prelim

Prog Rev: A-Prelim

2-Deburr if necessary

PRELIMINARY ISSUE
=> ml 09 07 08
=> ml 09/07/09
=> ml 09 07 08

110

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

6361.040

B# 111224

ml 09 07 08

Work Order ID 50074

July 8, 2009 6:34:41 AM

Page 2

Item ID: D3936-3

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Start Date: 7/08/09 Start Qty: 1.00

Required Date: 7/10/09 Req'd Qty: 1.00

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

Quality Control

ENGINEERING
APPROVAL

2

0

05/07/09

130

QC8- Inspect parts - second check

0.00



Brake NC

Memo

0.00

Brake NC

Bend as per Dwg

ENGINEERING
APPROVAL

2

0

05/07/09

140

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

PTO
Last page

Work Order ID 50074

Page 3

July 8, 2009 6:34:41 AM

Item ID: D3936-3

Accept



Setup Start



Revision ID: A-PRELIM

Stop



Item Name: Bottom

Start Date: 7/08/09

Start Qty: 1.00



Cust Item ID:

Required Date: 7/10/09

Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

160

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

170

Identify as per dwg & Stock Location: _____

0.00



Packaging

Memo

0.00

Packaging

See attached
a.m.m.!

This time
only


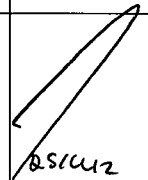

N/A

N/A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3936-3 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR: <u>50074</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
0507-09	150 160	W/O states to machine; dmg does hurt. Parts should be machine prior to Assy	 05/14/12	Either update; include machine on the dwg, or remove from W/O.			 05/14/12	 0507-09

NOTE: Date & initial all entries

Work Order ID 50074

July 8, 2009 6:34:41 AM

Page 4

Item ID: D3936-3

Accept

Setup Start

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Item Name: Bottom

Start Date: 7/08/09

Start Qty: 1.00

Cust Item ID:

Required Date: 7/10/09

Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

180

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

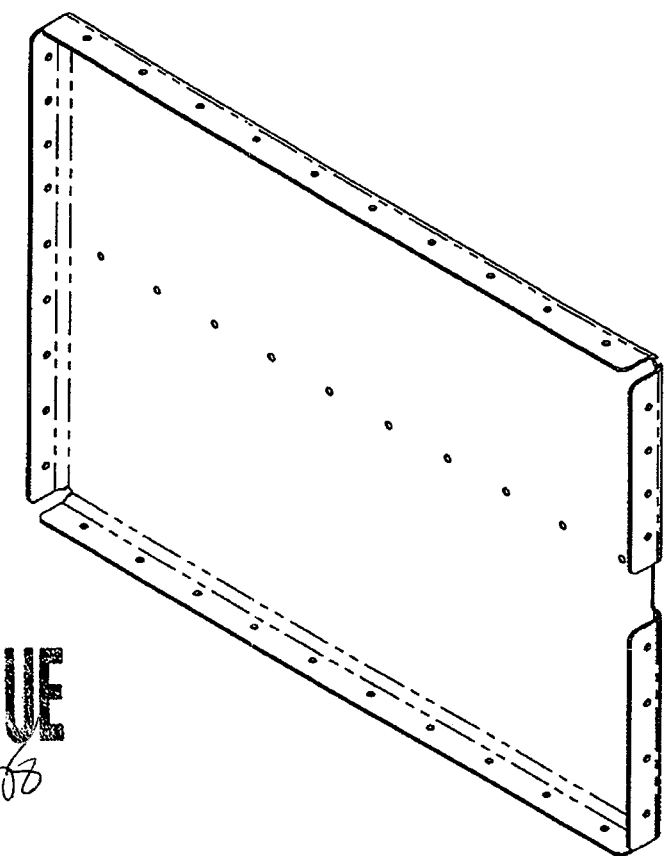
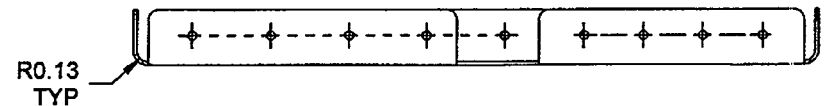
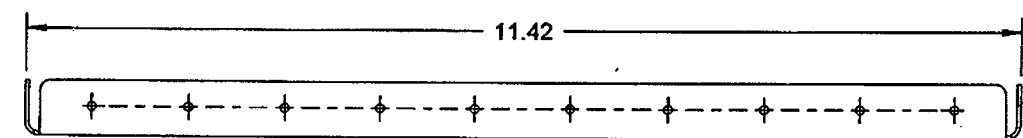
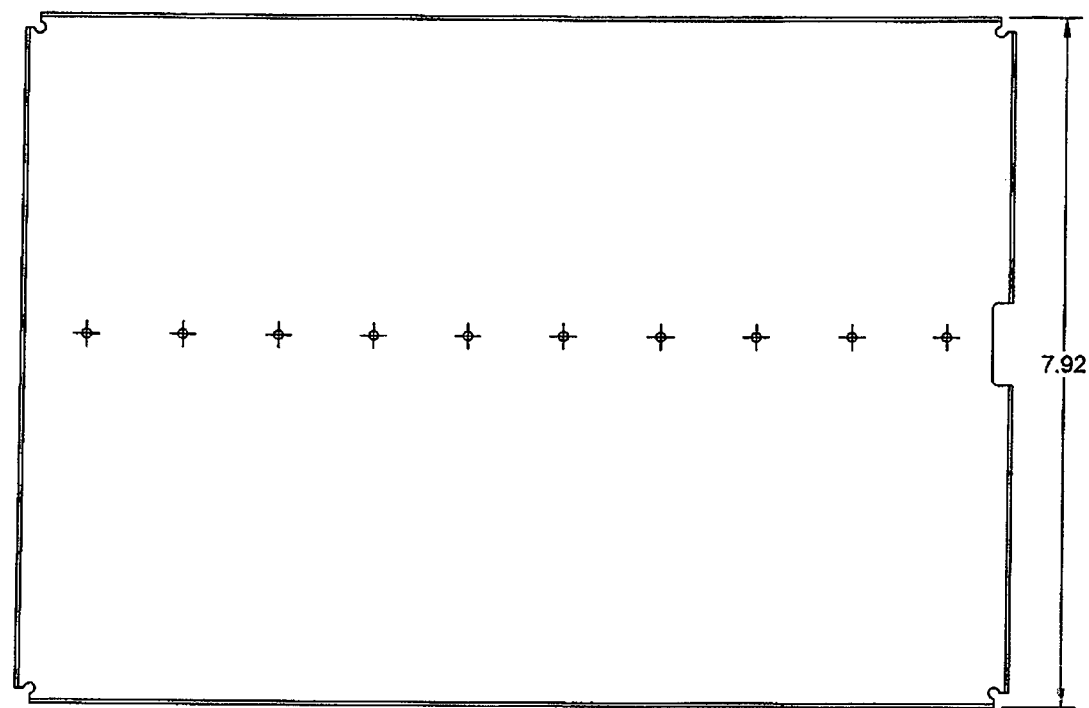
MF 09-07-09

TESTED 4 SCRAP
PER DAVID S.
4
HARVEY S

8 7 6 5 4 3 2 1

D
C
B
A

D
C
B
A



PRELIMINARY ISSUE
10/09/06/08

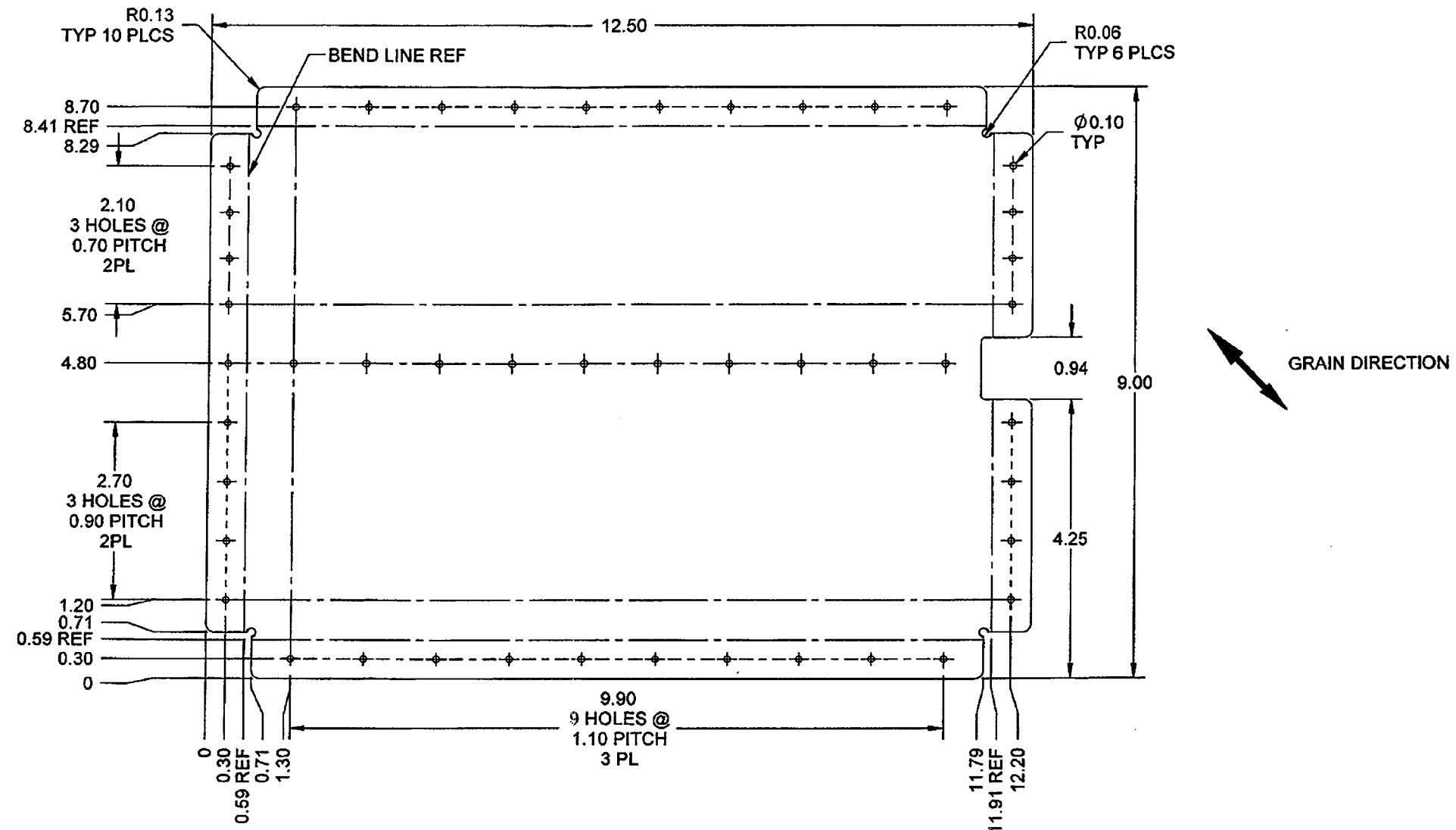
D3936-3 BOTTOM
MADE FROM D3936-3F

- NOTES:**
- 1) MATERIAL: N/A
 - 2) FINISH: N/A
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.43 lbs

DESIGN	<i>EF</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	<i>EF</i>		
CHECKED	<i>ALS</i>	DRAWING NO.	REV. A
MFG. APPR.	<i>E</i>	D3936	SHEET 4 OF 7
APPROVED		TITLE	SCALE
DE APPR.		MAPBOX	NTS
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8 7 6 5 4 3 2 1

PRELIMINARY ISSUE



D3936-3F BOTTOM FLAT PATTERN

NOTES:

- 1) MATERIAL: 6061-T6 (OR 6060-T62) ALUMINUM SHEET, 0.040 THICK
PER AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027
REF. DART SPEC M6061/T65.040
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.43 lbs

DESIGN	TF	DART AEROSPACE LTD	
DRAWN	AE	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ALS	DRAWING NO.	REV. A
MFG. APPR.	EE	D3936	SHEET 5 OF 7
APPROVED		TITLE	SCALE
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L Lacelle

From: Harvey Siemens [hsiemens@dartaero.com]
Sent: July 8, 2009 12:16 PM
To: 'L Lacelle'
Subject: RE: map box

Linda

Since this one part is going to be used for testing it doesn't need paint or powder coat or even alodine. Just the part assembled will be fine.

David should have the corrected DXFs now for the hole glitch.

Thanks for getting it out fast

Regards,

Harvey Siemens

Mechanical Designer
DART Aerospace Ltd.

P: 403-717-0328
F: 403-717-1288
E: hsiemens@dartaero.com
W: www.dartaero.com

M: 1060 McTavish Road NE, Calgary, Alberta, T2E 5G9

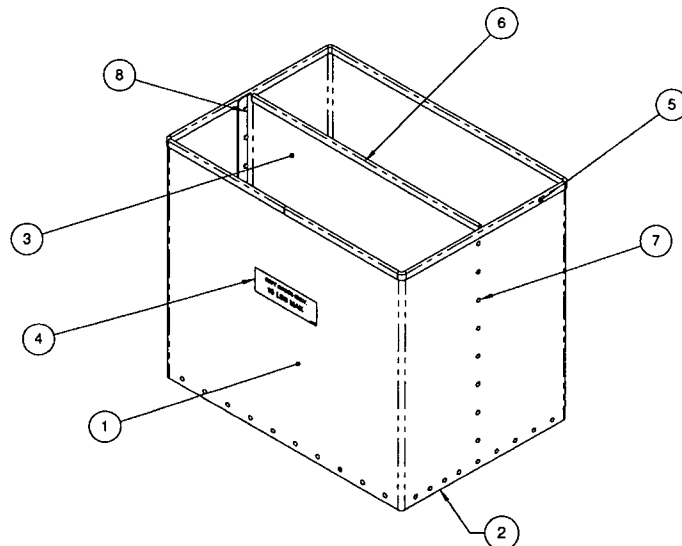
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From: L Lacelle [mailto:llacelle@dartaero.com]
Sent: Wednesday, July 08, 2009 9:29 AM
To: 'Harvey Siemens'
Cc: 'David Duval'; 'Sian Willems'
Subject: map box

There is a problem with the holes, David is working on it, we will only TRY to ship out by Friday, depending on when this gets fixed.

Thank You,
Linda Lacelle
Production Manager
Dart Aerospace Ltd

ITEM NO.	QTY. -041	PART NUMBER	DESCRIPTION
1	1	D3936-1	SIDES
2	1	D3936-3	BOTTOM
3	1	D3936-5	DIVIDER
4	1	D3938-3	PLACARD
5	1	D3941-40	RUBBER CUSHION
6	1	D3941-12	RUBBER CUSHION
7	56	MS20426AD3-4	RIVET
8	8	MS20426AD3-5	RIVET



D3936-041 MAPBOX ASSEMBLY

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT "BLACK SANDTEX" (4.3.5.7) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3936-041" AND B/N USING A WHITE FINE POINT PAINT MARKER
- 7) WEIGHT: 2.54 lbs

ASSEMBLY INSTRUCTIONS

1. BEND D3936-1/-3/-5 PARTS PER SHEETS 2-7.
2. POSITION D3936-5 DIVIDER IN PLACE INSIDE THE D3936-1 SIDES AND CLECO IN PLACE.
3. POSITION THE D3936-3 BOTTOM IN PLACE AGAINST THE D3936-5 DIVIDER AND INSIDE THE D3936-1 SIDES.
4. TRANSFER DRILL 10X $\phi 0.098$ (#40 DRILL) HOLES FROM THE D3936-3 BOTTOM TO THE D3936-5 DIVIDER. PLACE CLECOS IN TRANSFER DRILLED HOLES TO MAINTAIN ALIGNMENT AS THEY ARE DRILLED.
5. TRANSFER DRILL 38X $\phi 0.098$ HOLES FROM D3936-1 SIDES TO D3936-3 BOTTOM. PLACE CLECOS IN TRANSFER DRILLED HOLES TO MAINTAIN ALIGNMENT AS THEY ARE DRILLED.
6. REMOVE ALL CLECOS AND COUNTERSINK 64X EXTERIOR HOLES $\phi 0.179 \times 100^\circ$. DEBURR ALL HOLES IN ALL PARTS.
7. REASSEMBLE PARTS USING CLECOS IN EVERY THIRD HOLE TO MAINTAIN ALIGNMENT.
8. RIVET D3936-1 SIDE TO D3936-5 DIVIDER USING MS20426AD3 RIVETS. INSTALL MS20426AD3 RIVETS RANDOMLY THROUGHOUT ASSEMBLY SO THAT ALL PARTS ARE DRAWN TOGETHER EVENLY.
9. RIVET D3936-5 DIVIDER TO D3936-3 BOTTOM USING MS20426AD3 RIVETS. INSTALL MS20426AD3 RIVETS RANDOMLY THROUGHOUT ASSEMBLY SO THAT ALL PARTS ARE DRAWN TOGETHER EVENLY.
10. RIVET D3936-3 BOTTOM TO D3936-1 SIDE USING MS20426AD3 RIVETS. INSTALL MS20426AD3 RIVETS RANDOMLY THROUGHOUT ASSEMBLY SO THAT ALL PARTS ARE DRAWN TOGETHER EVENLY.
11. POWDER COAT ASSEMBLY PER NOTE 2.
12. TEST FIT RUBBER CUSHION TO TOP EDGE OF MAPBOX. TRIM AS REQUIRED FOR PROPER FIT.
13. REMOVE RUBBER CUSHION.
14. APPLY SMALL BEAD OF SILICONE/ADHESIVE TO TOP EDGE OF MAPBOX.
15. SLIDE RUBBER CUSHION OVER EDGE AND PRESS INTO SILICONE/ADHESIVE.
16. WIPE OFF ANY EXCESS SILICONE/ADHESIVE BEFORE IT DRIES/CURES.
17. APPLY D3938-3 PLACARD AS SHOWN.
18. ALLOW SEALANT/ADHESIVE TO CURE/DRY 24 HRS BEFORE SHIPPING PART.

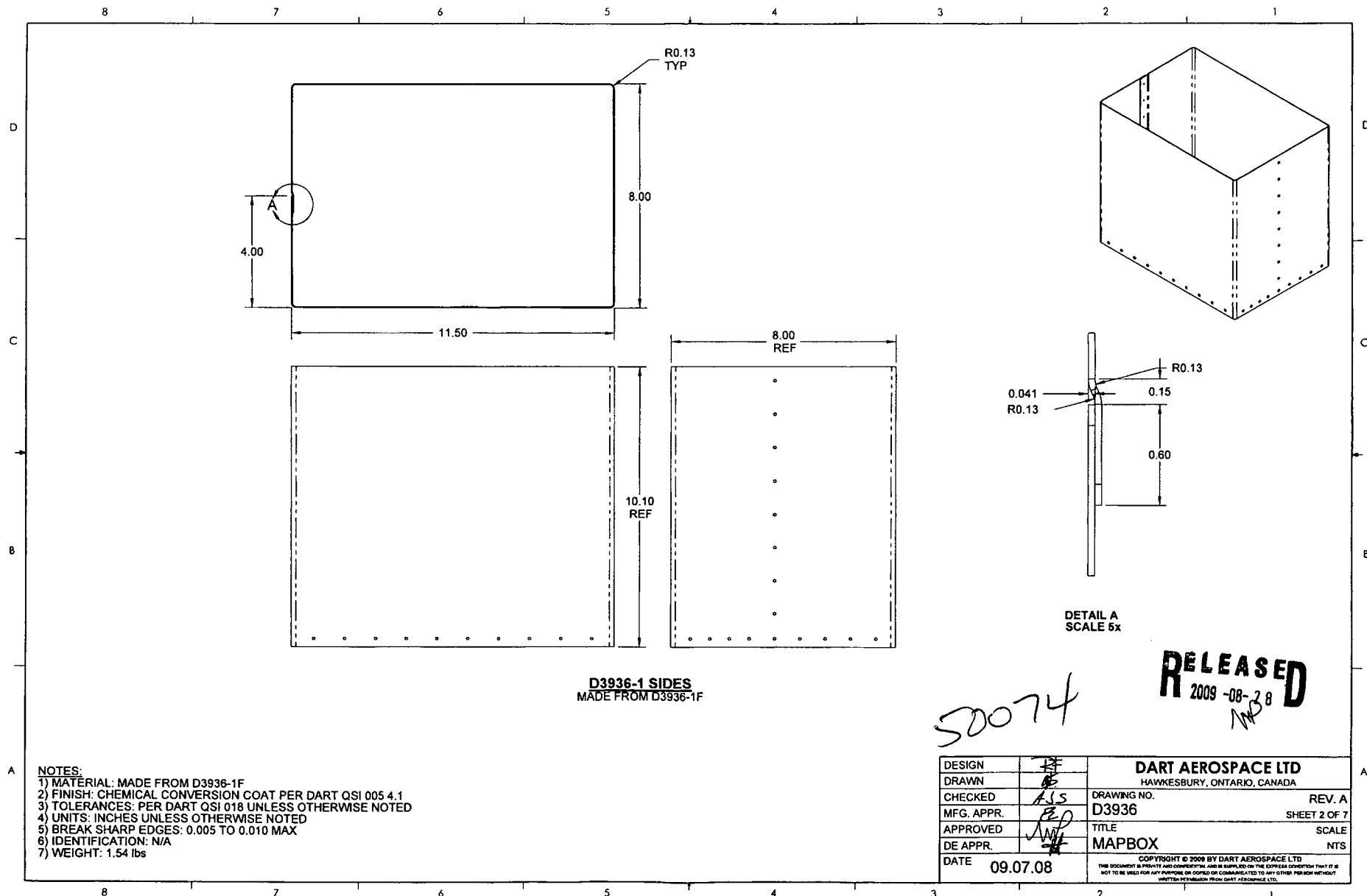
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2009-08-28

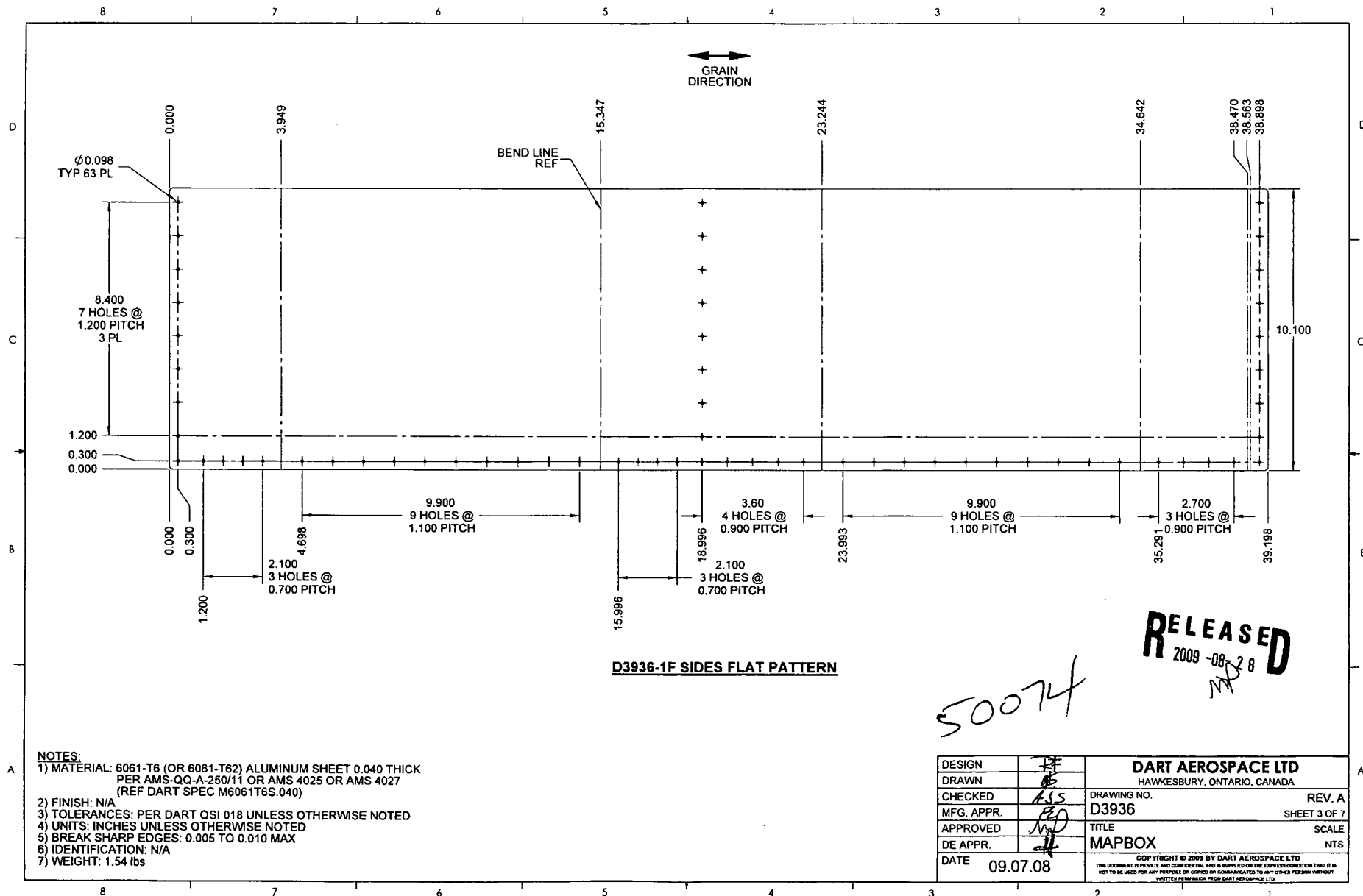
50074

REV.	NEW ISSUE	DESCRIPTION	BY	DATE
DESIGN				
DRAWN				
CHECKED				
MFG. APPR.				
APPROVED				
DE APPR.				
DATE	09.07.08			

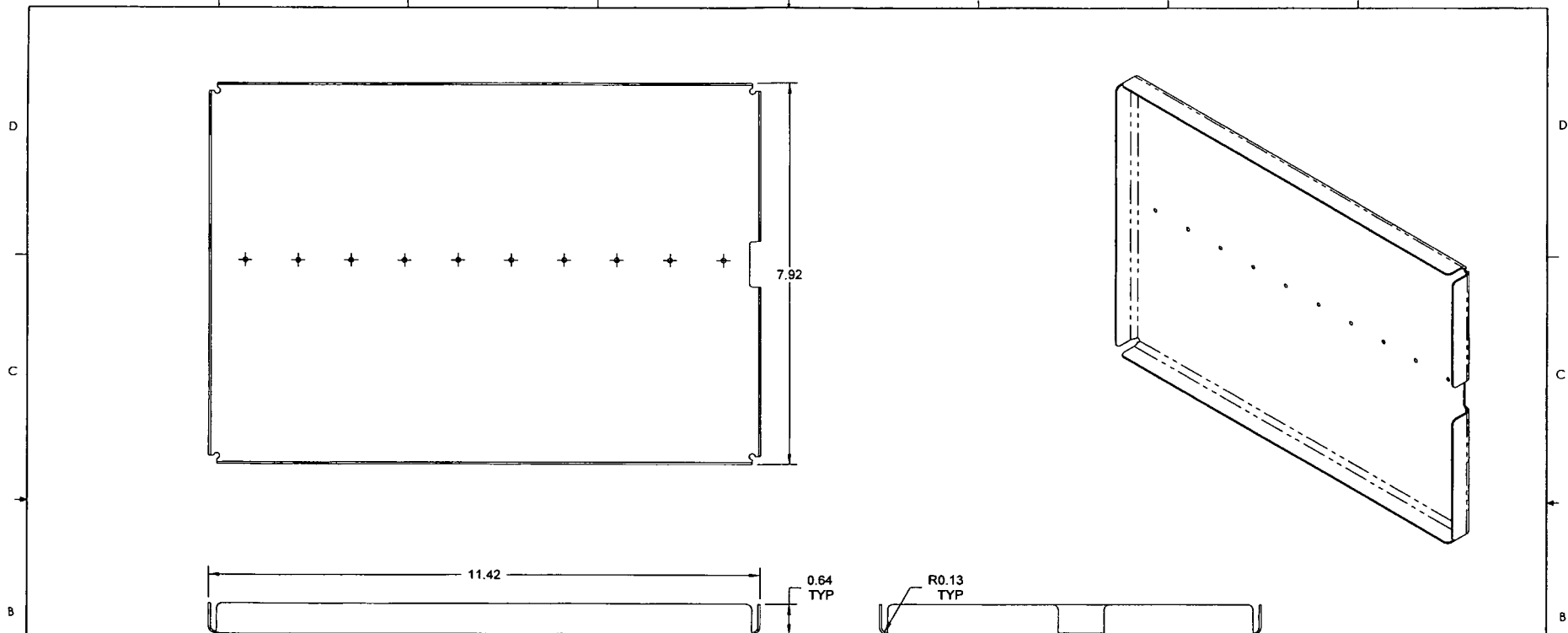
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		REV. A
DRAWING NO.	D3936	SHEET 1 OF 7
TITLE	MAPBOX	SCALE NTS

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8 7 6 5 4 3 2 1



D3936-3 BOTTOM
MADE FROM D3936-3F

50074

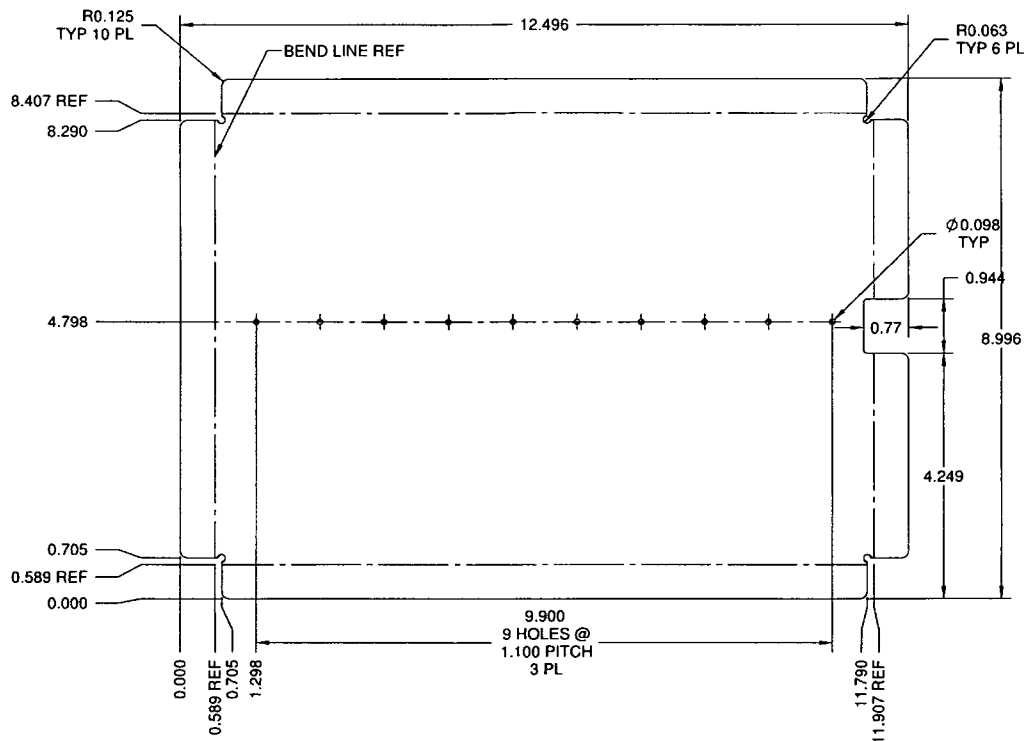
RELEASED
2009-08-28
MM

NOTES:

- 1) MATERIAL: MADE FROM D3936-3F
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.43 lbs

DESIGN	3F	DART AEROSPACE LTD	
DRAWN	JS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	JS	DRAWING NO.	REV. A
MFG. APPR.	JS	D3936	SHEET 4 OF 7
APPROVED	MM	TITLE	SCALE
DE APPR.	MM	MAPBOX	NTS
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8 7 6 5 4 3 2 1



D3936-3F BOTTOM FLAT PATTERN

NOTES:

- 1) MATERIAL: 6061-T6 (OR 6061-T62) ALUMINUM SHEET 0.040 THICK
PER AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027
(REF DART SPEC M6061T6S.040)
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.43 lbs

DESIGN	<i>DF</i>	DART AEROSPACE LTD	
DRAWN	<i>AB</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>ALS</i>	DRAWING NO.	REV. A
MFG. APPR.	<i>BE</i>	D3936	SHEET 5 OF 7
APPROVED	<i>40</i>	TITLE	SCALE
DE APPR.	<i>HT</i>	MAPBOX	NTS
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RELEASED
2009-08-28
MD

50074

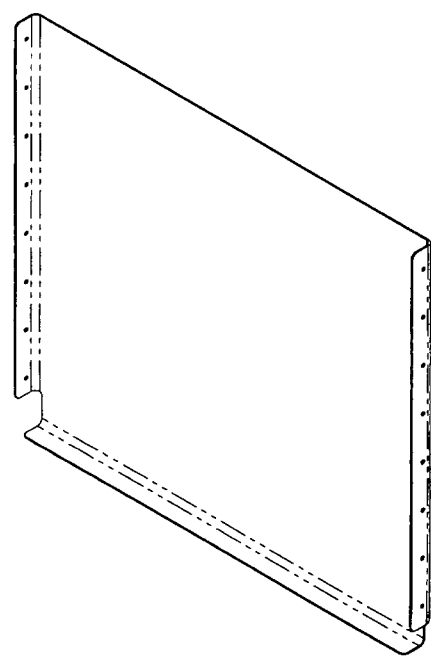
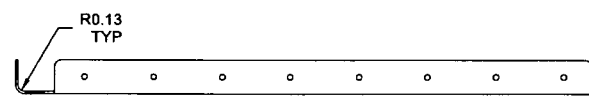
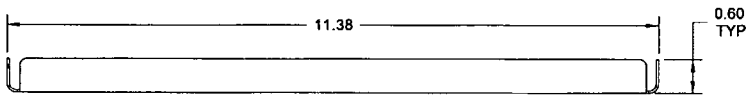
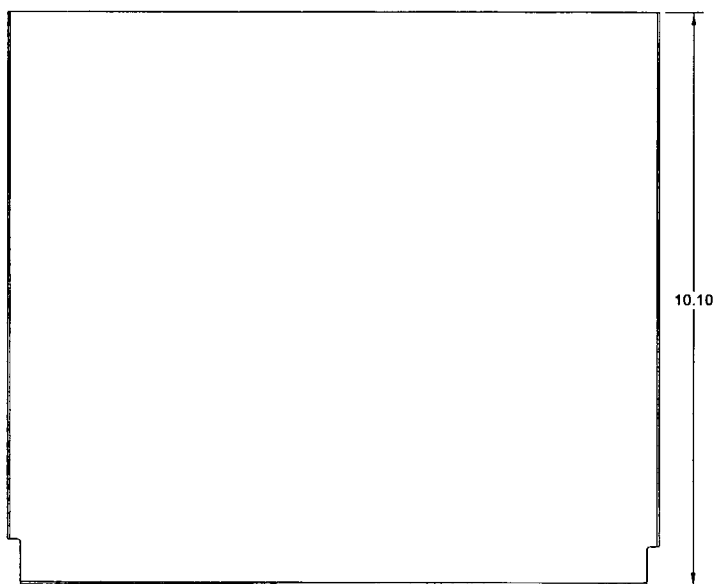
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D

C

B

A



D

C

B

A

D3936-5 DIVIDER
MADE FROM D3936-5F

50074
RELEASED
2009-08-28
MB

- NOTES:**
- 1) MATERIAL: MADE FROM D3936-5F
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: N/A
 - 7) WEIGHT: 0.50 lbs

DESIGN	DF	DART AEROSPACE LTD	
DRAWN	DF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AS	DRAWING NO.	REV. A
MFG. APPR.	DF	D3936	SHEET 6 OF 7
APPROVED	DF	TITLE	SCALE
DE APPR.	DF	MAPBOX	NTS
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8 7 6 5 4 3 2 1

